

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1                    1.        (Original) A medical method for treating a person, the method  
2 comprising:  
3                    delivering a positive pressure breath to the person;  
4                    extracting respiratory gases from the person's airway using a vacuum following  
5 the positive pressure breath to create an intrathoracic vacuum to lower pressures in the heart and  
6 to enhance blood flows back to the heart; and  
7                    repeating the steps of delivering positive pressure breaths and extracting  
8 respiratory gases.

1                    2.        (Original) A method as in claim 1, wherein the person is suffering from  
2 ailments selected from a group consisting of head trauma associated with elevated intracranial  
3 pressures, low blood pressure, low blood circulation, low blood volume, cardiac arrest and heart  
4 failure.

1                    3.        (Original) A method as in claim 1, further comprising regulating the  
2 amount of intrathoracic vacuum using a threshold valve that is in fluid communication with the  
3 person's airway.

1                    4.        (Original) A method as in claim 3, wherein the threshold valve is  
2 configured to open when the person's negative intrathoracic pressure reaches about -3 cm H<sub>2</sub>O  
3 to about -20cm H<sub>2</sub>O to permit respiratory gases to flow into the person's airway.

1                    5.        (Original) A method as in claim 3, further comprising stopping  
2 application of the vacuum when applying the positive pressure breath using a switching  
3 arrangement.

1                   6.       (Original) A method as in claim 1, wherein the positive pressure breath is  
2 delivered using source selected from a group consisting of a mechanical ventilator, a hand held  
3 bag valve resuscitator, mouth-to-mouth, or a means to provide intermittent positive pressure  
4 ventilation.

1                   7.       (Original) A method as in claim 1, wherein the respiratory gases are  
2 extracted with a constant extraction, varied over time, or a pulsed extraction.

1                   8.       (Original) A method as in claim 1, wherein the breath is delivered for a  
2 time in the range for about 250 milliseconds to about 2 seconds.

1                   9.       (Original) A method as in claim 1, wherein the breath is delivered at a  
2 rate in the range from about 0.1 liters per seconds to about 5 liters per second.

1                   10.      (Original) A method as in claim 1, wherein the vacuum is maintained at a  
2 pressure in the level from about 0 mmHg to about -50 mmHg.

1                   11.      (Original) A method as in claim 10, wherein the vacuum is maintained  
2 with negative flow or without flow.

1                   12.      (Original) A method as in claim 1, wherein the time the positive pressure  
2 breath is supplied relative to the time in which respiratory gases are extracted is in the range  
3 from about 0.5 to about 0.1.

1                   13.      (Original) A method as in claim 1, wherein the respiratory gases are  
2 extracted using equipment selected from a group consisting of a mechanical ventilator, a vacuum  
3 with vacuum regulator, a phrenic nerve stimulator, an extrathoracic vest, a ventilator bag, and an  
4 iron lung cuirass device.

1                   14.      (Original) A method as in claim 1, wherein the respiratory gases are  
2 lowered to an intrathoracic pressure of about -5 mmHg to about -10 mmHg and then kept  
3 generally constant until the next positive pressure breath.

1                   15.     (Original) A method as in claim 1, wherein the positive breath is slowly  
2 delivered and the respiratory gases are rapidly lowered to an intrathoracic pressure of about -5  
3 mmHg to about -20 mmHg and then gradually reduced towards about 0 mmHg.

1                   16.     (Original) A method as in claim 1, wherein the respiratory gases are  
2 slowly lowered to a pressure of about – 5 mmHg to about -20 mm Hg.

1                   17.     (Original) A device for lowering intrathoracic pressures, the device  
2 comprising:  
3                   a means to interface with the patient's airway;  
4                   a means to repeatedly extract respiratory gases from the patient's lungs and  
5 airway to create and periodically maintain a negative intrathoracic pressure;  
6                   a means to repeatedly regulate the extraction of respiratory gases within the  
7 patient's lungs and airway; and  
8                   a means to deliver a positive pressure breath, to periodically provide inspiration of  
9 respiratory gases.

1                   18.     (Original) A device as in claim 17, wherein the means to extract  
2 respiratory gases comprises vacuum source selected from a group consisting of a suction line or  
3 venturi device attached to an oxygen tank

1                   19.     (Original) A device as in claim 17, further comprising a switching  
2 mechanism to stop the extraction of respiratory gases during delivery of a positive pressure  
3 breath, wherein the switching mechanism is selected from a group consisting of mechanical  
4 devices, magnetic devices, and electronic devices.

1                   20.     (Original) A device as in claim 17, wherein the means for extracting  
2 respiratory gases is selected from a group consisting of a mechanical ventilator, a vacuum with  
3 vacuum regulator, a phrenic nerve stimulator, an extrathoracic vest, a ventilator bag, and an iron  
4 lung cuirass device.

1                   21.     (Original) A device as in claim 17, wherein the means for regulating  
2 comprises a threshold valve that is in fluid communication with the person's airway.

1                   22.     (Original) A device as in claim 21, wherein the threshold valve is  
2 configured to open when the person's negative intrathoracic pressure reaches about -3 cm H<sub>2</sub>O  
3 to about -20cm H<sub>2</sub>O to permit respiratory gases to flow into the person's airway.

1                   23.     (Original) A device as in claim 17, wherein the means for delivering a  
2 positive pressure breath is selected from a group consisting of a mechanical ventilator, a hand  
3 held bag valve resuscitator, mouth-to-mouth, or a means to provide intermittent positive pressure  
4 ventilation.

1                   24.     (Original) A device for lowering intrathoracic pressures, the device  
2 comprising:  
3                   a housing having an interface that is adapted to couple the housing to the person's  
4 airway;  
5                   a vacuum source in fluid communication with the housing for repeatedly  
6 extracting respiratory gases from the person's lungs and airway to create and periodically  
7 maintain a negative intrathoracic pressure;  
8                   a vacuum regulator to regulate the extraction of respiratory gases from the  
9 patient's lungs and airway; and  
10                  a positive pressure source in fluid communication with the housing for  
11 intermittently supplying positive pressure breaths to the person.

1                   25.     (New) A pressure regulator, comprising:  
2                   a housing having a patient interface that is adapted to be coupled to a person's  
3 airway, a vacuum interface that is adapted to be coupled to a vacuum source and a positive  
4 pressure interface that is adapted to be coupled to a source of positive pressure;  
5                   a switching mechanism to alter respiratory gas flows within the housing such that  
6 a vacuum may be provided at the patient interface while a vacuum is being applied at the

7 vacuum interface, and positive pressure ventilation may be provided at the patient interface while  
8 positive pressure is being applied at the positive pressure interface.

1           26.     (New) A pressure regulator as in claim 25, wherein the switching  
2 mechanism is configured to stop the application of the vacuum at the patient interface during  
3 delivery of a positive pressure breath at the positive pressure interface, and wherein the  
4 switching mechanism is selected from a group consisting of mechanical devices, magnetic  
5 devices and electronic devices.

1           27.     (New) A pressure regulator as in claim 25, further comprising a means for  
2 regulating the vacuum provided at the patient interface.

1           28.     (New) A pressure regulator as in claim 27, wherein the means for  
2 regulating comprises a threshold valve that is configured to open when the person's negative  
3 intrathoracic pressure reaches about -3 cm H<sub>2</sub>O to about -25 cm H<sub>2</sub>O to permit respiratory gases  
4 to flow into the person's airway through the patient interface.

1           29.     (New) A pressure regulator as in claim 25, further comprising a means  
2 for regulating the position pressure ventilation provided at the patient interface.

1           30.     (New) A pressure regulator as in claim 27, wherein the means for  
2 regulating the vacuum is configured to receive information on at least one physiological  
3 parameter of the patient to alter the applied vacuum based on the received information.

          31.     (New) A pressure regulator as in claim 25, further comprising a pressure  
measurement devices that is configured to measure one or more pressures.